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AUTHOR Berg, Stephen R.; Berg, Kathleen F.
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ABSTRACT

This study was undertaken to determine the relative risk of violence among students attending Hawaii schools with higher proportions of children of Department of Defense (DOD) personnel. Approximately 12% of the total public school enrollment of nearly 190,000 students is DOD connected. Forty-eight schools (8 high schools, 8 intermediates, and 32 elementary schools) enroll about 95% of the military dependents and nearly 80% of all federal departments in Hawaii public schools. Data for these 48 schools were analyzed and means compared to statewide averages for the past 3 school years on indicators and variables related to risk of disorder and violence. These included measures of socioeconomic status, limited English proficiency, attendance, graduation, student perceptions of home-school relations and learning climate, and the rates of commission of six categories of offenses leading to suspensions. The most salient risk factor for disorder and violence for DOD-connected students and for most students in Hawaii is large school size. On most measures, the schools with high percentages of DOD dependents compared favorably with statewide averages for comparable schools. Exceptions were drug offenses related to smoking cigarettes. (Contains 16 references.) (MKA)

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Relative Risk of Violence Among Department of Defense Connected Students in Hawai'i Schools

Report without Appendixes

by

Stephen R. Berg, Hawaii Pacific University
Kathleen F. Berg, University of Hawai'i at Manoa

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Stephen R. Berg, Hawaii Pacific University
Kathleen F. Berg, University of Hawai'i at Manoa

Abstract

This study was undertaken to determine the relative risk of violence among students attending Hawai'i schools with higher proportions of children of Department of Defense (DOD) personnel. Approximately 12% of the total public school enrollment of nearly 190,000 students is DOD connected. Forty-eight schools (8 high schools, 8 intermediates, and 32 elementary schools) enroll about 95% of the military dependents and nearly 80% of all federal dependents in Hawai'i public schools. Data for these 48 schools were analyzed and means compared to statewide averages for the past 3 school years on indicators and variables related to risk of disorder and violence. These included measures of SES, limited English proficiency, attendance, graduation, student perceptions of home-school relations and learning climate, and the rates of commission of six categories of offenses leading to suspensions. The most salient risk factor for disorder and violence for DOD-connected students, and for most students in Hawai'i, is large school size. On most other measures, the schools with high percentages of DOD dependents compared favorably with statewide averages for comparable schools. Exceptions were drug offenses related to smoking cigarettes, where rates at several high schools exceeded the state mean, and student perceptions of their schools' home-school relations and learning climates, which were some of the least positive in the state. Although schools with high proportions of DOD-connected students appeared to be no more at risk for violence than students in other public schools in Hawai'i, statewide indicators, such as those from the Hawai'i Youth Risk Behavior Surveys, show that some risks for disorder and violence are relatively greater in Hawai'i than in other U.S. middle and high schools. Of particular concern are Hawai'i students' relatively high rates of reporting risk behaviors related to unsafe school campuses—physical fights, property damage and theft, early marijuana use, alcohol and marijuana use on school property, and the availability on school property of illegal drugs.*

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Introduction
Background for the Study

This study was undertaken to determine the relative risk of violence among students attending Hawai'i schools with higher proportions of children of Department of Defense (DOD) personnel. Recent national and local events have heightened concern about what appears to be a growing problem of violence in our communities and schools. "Tragedy in paradise: The Xerox shootings" was *The Honolulu Advertiser* headline on 3 November 1999. The newspaper stories went on to describe the slaying of seven people by a coworker as the worst mass murder in the state's history and the latest in a series of shootings at schools, churches, and businesses across the nation. Local people reacting to it were shocked, then saddened. References were made to Littleton, Colorado and the horrific school shootings there, to our society's culture of violence and its manifestations on our roads, in our homes and workplaces, and in the media. Some of the people interviewed in the wake of the tragedy were not surprised that it finally happened in Hawai'i. "It's right under the surface; it's always right there" (Dayton & Nakaso, p. A1) was the comment of one, who went on to say that the problems of racial tension, people working multiple jobs, and drug abuse in Hawai'i are ignored. Another said the pace of living and working in Honolulu makes people self-absorbed so that "we don't see the truth" (p. A10). "This is the best place in the world to live, but we have not been immune to violence" (p. A10).

Honolulu as a busy urban center might be the expected place for violent outbursts to occur. But rural O'ahu and the outer islands have not been immune to violence either, nor have the schools there.

School Violence and the Department of Education

James Campbell High School in Ewa Beach, a rapidly developing area well west of Honolulu, suspended 25 students after a 2 February 2000 brawl at the school that resulted in the hospitalization of two students (Gonser, 2000). Several parents kept their children out of school over safety concerns surrounding this incident and others. During the previous year the school suffered the theft of $50,000 worth of new computers as well as the injury of 13 students in January 1999 from the explosion of a homemade "sparkler bomb" in a stairwell; three students were arrested for the latter. The president of the Campbell Parent Teacher Student Association (PTSA) told the newspaper that parents consider school safety a higher priority even than curriculum. In response to concerns, the school hired more security guards and brought in off-duty police officers. In mid-February the school principal announced formation of a task force of teachers, "military families, parents and students" (p. A23) to look for ways to prevent campus violence in the future.

Many were shocked when an eighth-grader on Maui was hospitalized after a vicious beating by four classmates at Kalama Intermediate on 17 November 1999. The boy was kicked in the stomach so hard that his pancreas was damaged; he was in the

hospital in guarded condition and expected to be there for 6 weeks (Gordon, 1999). According to his mother, her son had been the target of teasing and unprovoked attacks before the beating incident, and she described how he had been tripped and shot with paper clips that cut his skin (Keesing, 1999). She, and over 100 others gathered at a PTSA meeting on 30 November, were very vocal about their belief that Kalama Intermediate was a dangerous school; she felt the school officials had not taken the incident seriously enough (Gordon, 1999). Three weeks after the attack, *The Honolulu Advertiser* ran a story on bullying in the schools, wherein it was reported that Hawai'i educators said it is "time to stop sweeping the issue under the carpet as something that is 'just part of growing up'" (Keesing, 1999, p. A27). The article included statistics on harassment incidents that are reported by schools to the Hawai'i Department of Education (DOE) and described a "troubling new trend" here—court-issued temporary restraining orders to prevent students from approaching or contacting other students. The DOE reported plans to provide training in February 2000 to a group of teachers who can then lead workshops for other teachers on "bully-proofing" schools. The DOE has also produced a video on bullying to be distributed to all intermediate and high schools as soon as funding allows, and its definition of harassment will now include the word "bully."

The DOE is taking steps to deal with violence in Hawai'i schools. Reported along with the sometimes sensationalized news of violent incidents at schools is ample evidence that the DOE knows Hawai'i is not immune and that the Department is trying to deal with, not ignore, the problem. The reaction by DOE may be typically low key, in keeping with the local culture, but it is also limited by funding during a time when the state has been suffering from a long-term economic downturn. Still, the DOE has been taking steps to deal with conflicts on their public school campuses. The DOE was forced to look very seriously at diversity education by a series of headline-grabbing incidents in 1997, '98, and '99 involving African American students being mocked or harassed for their race (Anwar, 1999). A news article in August 1999 described formal diversity programs at Maui's Lahainaluna High School and Pahoa Intermediate and High School on the Big Island. Kevin Shollenberger, Hawai'i regional director of the National Coalition Building Institute who was overseeing those programs for the DOE, was described as saying that one of the challenges was "breaking through Hawai'i's veneer of interracial aloha" (p. A3). Because of this, many believe that racism is not a problem here. The DOE acknowledges otherwise and is actively looking for "a solid diversity curriculum" to institutionalize tolerance, not just "do a one-shot deal" (p. A3).

The DOE has taken other steps toward improving the safety of school campuses. Over a year ago, the DOE joined with the Hawaiian Association of Independent Schools, the Hawaii Catholic Schools, and members of the Honolulu Police Department and the State Legislature to form the Hawaii Schools Safety Consortium. This effort to bring the three schools systems—public, private, and parochial—into accord on school safety issues has succeeded in opening lines of communication, sponsoring presentations and workshops on teasing and bullying, adopting the Children's Peace Camp Hawaii, and introducing three bills for consideration by the State Legislature.

The DOE has acknowledged that bigotry and violence are problems here just as they are elsewhere in the country, and they have sought and won federal funds to help combat the problem. In September 1999, the Central school district was awarded an anti-violence grant of $1.8 million per year for 3 years for social services and community police work (Blakeman, 1999). In March 2000, State Schools Superintendent Paul LeMahieu announced the expenditure of part of those funds for placing retired law enforcement officers in 12 public high schools as "school safety managers" (Masuoka, 2000, p. A1), saying, "The issue of safety on campus is a pressing concern." Officers are also planned for 11 middle schools next school year. These are serious efforts aimed at the prevention of school violence and the re-establishment of a sense of safety at school. Such efforts are needed and would be well informed by the identification of groups and schools most at risk for violence and most in need of preventive measures.

Focus of the Present Study

That returns us to the focus of the present study—the relative risk of violence among students attending Hawai'i schools with higher proportions of children of Department of Defense (DOD) personnel, both military and civilian.

The prominent presence of the military in Hawai'i results in a large, distinct group of students who may or may not be differentially at risk of school violence (perpetration, victimization, and anti-social behavior in general). The existence of education liaisons from each branch of the military services is an acknowledgment of potential special circumstances and problems that could arise within the school community that serves both the widely diverse population of the State of Hawai'i and the more transient military community. More recently, the establishment of the Joint Venture Education Forum, consisting of 16 military officers and state educators and cochaired by the superintendent of schools and an Air Force officer from the U.S. Pacific Command, highlights the military's concerns about education in Hawai'i as well as the DOE's commitment to resolve those issues (Gordon, 2000). Evidence, in part, of concerns for student safety is the growing popularity of home schooling among military families in Hawai'i, supported by several chapters of the Military Home Educators Network (MHEN) here and the availability on military bases of special gymnastics and other sports classes specifically for home schooled students (Koehlmoos, 2000).[1]

To the Department's credit, the DOE does not as a rule single out this subgroup of military dependents; they are fully integrated into the state's public schools. Consider also that the Department of Defense connected students in Hawai'i consist of more than just

[1] Estimates of how many students are home schooled in Hawai'i range from the DOE's low figure of 2523, based on the number who have registered with their local public school as required by law, to high figures of from 6000 to 9000, the estimate of the National Home Education Research Institute (NHERI) based on local membership in home schooling organizations, circulation of related publications, census data, and other figures NHERI uses. A recent study based on interviews with home schooling mothers indicates that the practice is prevalent in the local military community and prompted in part by concerns about school violence (Koehlmoos, 2000).

dependents of military personnel. They also include dependents of the large contingent of civilian federal employees of the DOD, many of them members of the local community, born and raised in the Islands and life-long residents.

To determine the relative risk to DOD-connected students for this study, it was necessary first to characterize them and locate them within the state school system, then to examine those schools most populated by them. Where school-level data were not available, statewide data were used to assess the overall risk of violence in Hawai'i schools, risks that presumably affect DOD-connected students in Hawai'i schools, too. As well as reporting the results of analyses done for this report, the authors have made an effort to include other data that may be useful for designing further analyses as well as for putting the results of this report in context (see Appendixes A, B, C, D, and E). Included are newspaper accounts of recent incidents and reactions and DOE efforts to deal with problems related to violence in Hawai'i schools and to the perception that it is a growing problem here as well as elsewhere (see Appendix E).

Method

Data Sources and Analyses

The resources drawn on for this report include the following: (a) the last 3 years of school-level data for Hawai'i Department of Education schools, including the DOE's School Status and Improvement Reports (SSIR) for school year 1997–98; (b) results from the 1997 Youth Risk Behavior Surveys (YRBS); (c) the *1998 Hawaii Student Alcohol and Drug Use Study*; and (d) the fourth annual "Quality Counts" report by *Education Week* magazine.

DOE School-Level Data

The most recent, most complete set of school-level DOE data available in a format that could be readily analyzed for this study was for the school year 1997–98. Those data were used for the purpose of characterizing the DOD-connected student population, locating them in the state school system, and exploring possible relationships between the proportions of federal dependents in a school and the rates of various offenses that led to suspensions in that school. The latest offense data available by school included the number of each of 24 different kinds of offenses associated with suspensions reported by that school to the DOE for a given school year. For purposes of analysis and reporting, the 24 kinds of offenses were aggregated into six general categories as indicated in the following list.

Violent offenses
: assault, extortion, robbery, sexual offenses, terroristic threatening

Property offenses
: property damage, burglary, theft

Weapons offenses
: dangerous weapons, firearms

Drug offenses
: marijuana, alcohol, smoking, illicit substances, sale of illicit substances, drug paraphernalia

Deportment offenses
: disorderly conduct, harassment, insubordination

Other offenses
: gambling, trespassing, false alarm, contraband, other school rule offenses

Scatter plots were created and correlation coefficients were calculated among the following variables: the percentage of enrollment that was federally connected (military, non-military, and total, excluding low rent housing recipients) by school, the offense rate per 100 students for each of the six categories of offenses reported by school, and school size (official September enrollment by school). These analyses were done separately for high schools (H), intermediate (I) and middle (M) schools, and elementary schools (E). Multilevel schools (e.g., H/E, H/I, E/I) and the few schools in Hawai'i that did not appear

in the DOE database of federally connected pupils were not part of these correlational analyses.

To help locate DOD-connected students within the school system, all regular public schools in Hawai'i in 1997–98 were ranked twice, once by percentage of enrollment that was federally connected and again by percentage of enrollment that was connected to the military only. Those high schools (H), intermediate/middle schools (I/M), and elementary schools (E) that ranked high on both lists were further examined by using each school's *School Status and Improvement Report* for school year 1997–98. In addition, for each of those schools identified, another individual school profile was created that featured school-level background information and suspension-related offense data along with the district and state averages on those same variables for comparable schools (schools of the same grade span as the target school) for the past 3 school years.[2]

Limitations of the Databases

A few comments about the databases are in order here, particularly about the federally connected pupils database and the database of offenses by school.

Federally Connected Pupils Database. First, the federally connected pupils database is compiled annually by the DOE to determine the amount of impact aid owed to the Hawai'i school system by the federal government. Students whose parents live, work, or live and work on federal property or live in federally subsidized low rent housing are categorized and counted. The complete database available for this report has two parts: federally connected pupils by school and employing agency excluding low rent housing recipients and the low rent housing pupils by school and employing agency. For the majority of this report, only the first part of the database was used. The low rent housing pupils included only four military dependents so was excluded from the analyses as not being representative of DOD-connected students.

In the database, pupils are classified using six categories of parental employment: five military (Air Force, Army, Navy/Marine Corps, Coast Guard, and National Guard) and one non-military. The five military categories are obviously DOD-connected students. The non-military category includes the many students whose parents are DOD-connected civilian employees, but it also includes students whose parents are connected with other federal departments and agencies operating in Hawai'i (e.g., the FBI, USDA, FAA, Customs Service, Immigration). The non-military federally connected pupils are, therefore, not all DOD connected. A percentage of those who are DOD-connected can be estimated by using employment figures from the Hawai'i State Department of Business, Economic Development & Tourism (DBEDT). By DBEDT figures, in 1998 there was an average of 30,400 federal government jobs in Hawai'i and an average of 16,050 civilian

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[2] These individual school profiles with comparable district and state means, minima, and maxima were developed by the Hawai'i Informed Prevention System (HIPS) at the University of Hawai'i Curriculum Research & Development Group as part of a federal project funded by the U.S. Department of Education Safe and Drug-Free Schools Program.

employees of the Air Force, Army, and Navy in Hawai'i that year (see Appendix D for source data). By these figures, 53% of the non-military federal jobs in 1998 were held by DOD civilian personnel, so we estimate that slightly over half of the non-military federal dependents were DOD connected. In this study, the analyses were generally done for three separate groups: military dependents only, non-military dependents only, and all federal dependents (excludes low rent housing pupils).[3]

Offenses Leading to Suspensions Database. Second, the offense data show great variability from school to school that seems to indicate as much variability in schools' recording and reporting of offenses as in the actual occurrences of offenses. This is especially true at the elementary school level and with the reporting of offenses in the categories of *deportment* and *other*, which do not usually involve breaking of laws and police reports. There are also data missing from this DOE database, especially from elementary schools, indicating that some schools did not submit reports, perhaps because they had no suspensions that year, or submitted them too late. Another caveat regarding the offense data is this: the offenses recorded are only those associated with suspensions in the schools. They are, then, only a gross measure of school disorder, reflecting behaviors that collectively resulted in only the extreme consequence of suspension. Most students who are suspended are charged with a number of offenses, so the raw data do not fairly reflect the number of students involved either. There are also repeat offenders, so that even the number of suspensions is not the same as the number of different students suspended. For the analyses here, we use offense rates, the number of offenses that lead to suspensions per 100 students enrolled. Caution is advised for using the data to make school-to-school comparisons: they are more useful and valid for comparing a single school to itself over time.

Given the limitations of the original databases and cautions about their use, they can still be valuable to help identify possible relationships and warn of potential trouble areas where preventive measures might be applied with good effect.

Results From the 1997 Youth Risk Behavior Surveys (YRBS)

The Hawai'i Department of Education has conducted the YRBS biennially, in odd years, since 1991 with federal support from the Division of Adolescent and School Health, Centers for Disease Control and Prevention (CDC). This study draws on results of the 1997 surveys conducted among a representative sample of 1409 high school and 1450 middle school students in Hawai'i (Pateman, Saka, & Lai, in press) and uses the nationally representative YRBS data for comparison. The Hawai'i and United States YRBS are used to monitor six categories of priority health risk behaviors that contribute

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[3] There is some evidence that this database undercounts military dependents in the state's schools. A recent newspaper article stated that "there are 28,000 military children in Hawai'i's public schools" (Gordon, 2000, p. A5). A recent communication with a DOE statistician produced a figure less than that but more than the DOE database used for this report indicates (16,716). The authors are working to resolve these apparent inconsistencies. Note that DOD and DBEDT tables in Appendix D do not separate out school-age dependents from total military dependents.

to the leading causes of morbidity, mortality, and social problems among adolescents and adults in the United States. Comparing Hawai'i youth risk behaviors with risk behaviors among youth across the country can help identify relative risk for students in Hawai'i schools in the following categories: behaviors that contribute to unintentional and intentional injuries, tobacco use, alcohol and other drug use, sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, unhealthy dietary behaviors, and physical inactivity. Of particular interest for this study are the first three categories of behaviors: injury and violence, tobacco use, and alcohol and other drug use.

Data from the Hawai'i surveys were statistically weighted to reflect the likelihood of sampling each student and to reduce bias by compensating for differing patterns of nonresponse (Saka & Lai, 1998a, 1998b). This allows us to make inferences concerning risk for all Hawai'i's public intermediate/middle and high school students. Reported and discussed here are the Hawai'i middle school results, Hawai'i high school results, U.S. high school results, and Hawai'i's relative rank among states/territories having weighted YRBS data (24 states and 3 territories) for each of the 45 YRBS items relating to injury and violence and tobacco, alcohol, and other drug use.

Although efforts are now being made with the CDC to get YRBS school-level data in the future, in the present data files the school identifiers had been stripped out and were not retrievable for the 1997 (and, it appears, for the 1999) data. As measures of risk and disorder, these school-level data, when they become available, will be enormously valuable. Unfortunately, for this report we could draw on only statewide results.

Results From the *1998 Hawaii Student Alcohol and Drug Use Study*

Only the introduction and overview of key findings were available at this time from this 450-page report, whose title in full is the *1998 Hawaii Student Alcohol and Drug Use Study (1991-1998) Hawaii Adolescent Treatment Needs Assessment* (Klingle & Miller, 1999). The report includes findings from a survey administered in the spring of 1998 to all 6th, 8th, 10th, and 12th grade students in attendance who had written parental consent to participate in the study. Survey responses came from over 25,000 students in 204 public schools and 44 private schools in Hawai'i. The study was done under the sponsorship of the State of Hawai'i Department of Health, Alcohol and Drug Abuse Division (ADAD) and draws on previous like surveys done as early as 1987 to assess trends in substance use by youth in Hawai'i. Hawai'i students are compared to other students in the U.S. by referring to comparison data from the national research and reporting program called *Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth.* Also, by using the DSM-III-R diagnostic criteria for substance abuse and dependence along with the surveys, the authors determined substance abuse treatment needs for students in Hawai'i. Study results for individual schools and districts are to be reported in separate documents; those were not available to us at this time but would be worthwhile pursuing, presuming there were representative samples of respondents to the survey at the schools identified with higher proportions of children of DOD personnel. Note that the data from the ADAD-sponsored surveys are not statistically weighted to

compensate for over- or undersampling of particular schools or groups of students, and the sample size has differed greatly from year to year.

"Quality Counts 2000" Report by *Education Week* Magazine

Education Week compiled data on over 75 indicators to assign point scores and grades to each state in the nation in five categories: student achievement, standards and accountability, improving teacher quality, school climate, and resources. Complete details about what was graded and how are readily available at the *Education Week* Web site (www.edweek.org). For this study to determine the relative risk of violence for DOD-connected students in Hawai'i schools, the category of school climate was of particular interest.

Results

Distribution of Federally Connected Students in Hawai'i Public Schools

In Hawai'i there is only one school district, which is administered by the State. The schools are divided geographically into seven groups, which are called *districts*, however. Four districts are on O'ahu: Honolulu, Central, Leeward, and Windward. The Maui district includes Lana'i and Moloka'i; Kaua'i district includes Ni'ihau. The Big Island makes up the Hawai'i district. Data collected in 1997–98 show federally connected students (including low rent housing pupils) enrolled in 229 of the 246 regular public schools open at that time (93%). Percent enrollment per school ranged from over 100% (an artifact of the different times that enrollment data and federally connected student data were collected) to 0% for 17 outer island schools not listed in the DOE federally connected pupils database that year. See Figure 1.

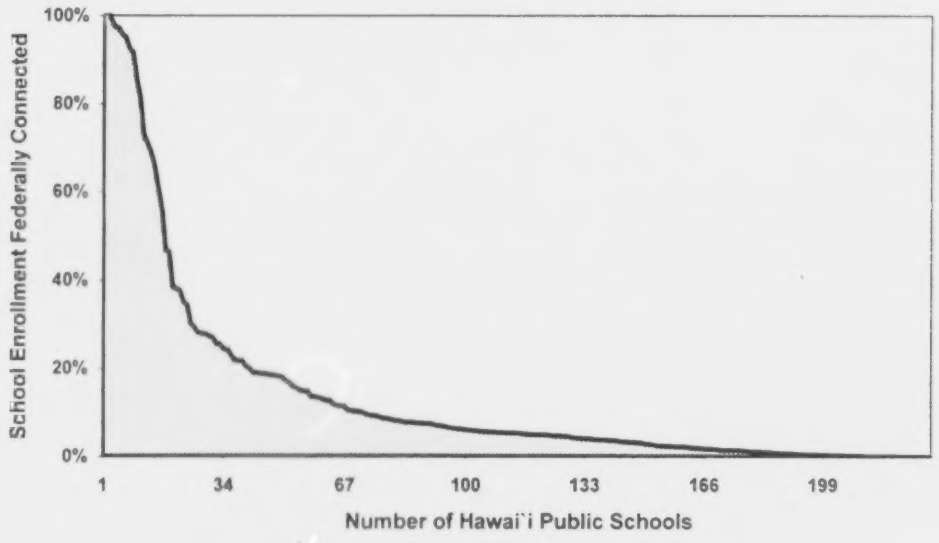

FIGURE 1. Distribution of federally connected pupils in Hawai'i public schools as a percentage of enrollment per school (includes low rent housing pupils).

When the low rent housing pupils are removed from the analysis, 219 of 246 schools (89%) have federally connected students enrolled. The rest of the analyses in this report exclude the 4284 non-military and 4 military low rent housing pupils counted as federally connected pupils in 1997–98. The term *federal dependents* is used to describe the group that excludes low rent housing pupils; it includes military and non-military dependents and is estimated to be over 80% DOD connected (see page 8 of this report).

In school year 1997–98, all but 2 schools on O'ahu had at least some federal dependents enrolled, and 2 O'ahu schools had 100% military enrollment. In Hawai'i

district, 27 of 38 schools (71%) had federal dependents; in Maui, 17 of 30 schools (57%) and on Kaua'i, 14 of 15 schools (93%) had federal dependents as pupils. Overall in the state, federal dependents made up over 14% of the student enrollment in school year 1997-98, well over 26,000 of the approximately 189,000 public school students, nearly two-thirds of those military dependents (over 16,000). Table 1 gives the breakdown by district for military and non-military federal dependents in terms of actual numbers as well as percentage of enrollment.

TABLE 1. *Numbers and percentages of federally connected pupils by Hawai'i public school district for school year 1997–98 (excludes low rent housing)*

District	Official Sept. Enrollment	# Military % Military	# Fed connected non-military % Fed connected non-military	# Total fed connected % Total fed connected
Central	35,538	11,699 32.9%	3675 10.3%	15,374 43.3%
Leeward	37,071	3447 9.3%	3390 9.1%	6837 18.4%
Windward	19,980	1275 6.4%	1034 5.2%	2309 11.6%
Honolulu	35,354	164 0.5%	1253 3.5%	1417 4.0%
Kaua'i	11,039	66 0.6%	360 3.3%	426 3.9%
Hawai'i	28,506	48 0.2%	207 0.7%	255 0.9%
Maui	21,712	17 0.1%	33 0.2%	50 0.2%
Statewide Totals	189,200	16,716 8.8%	9952 5.3%	26,668 14.1%

If we estimate that 53% of non-military dependents are DOD connected, then 21,990 (16,716 + (.53)(9952)) of the 26,668 federal dependents in Table 1 (82%) are DOD connected, and approximately 12% of the Hawai'i public school enrollment is DOD connected.

Table 1 shows the largest impact by federal dependents in 1997–98 was on the Central district, where 43% of students were federally connected, 33% military dependents and 10% non-military dependents. All five of the high schools (grades 9–12) in the Central district had enrollments that were over 18% federal dependents, and in this district are located the two high schools with the highest percentages of military dependents (63% and 27%) as well as the highest percentages of total federal dependents (71% and 38%). The impact on Central district intermediate schools was much the same.

with the two highest percentages of military dependents (57% and 36%) as well as total federal dependents (61% and 47%) located in Central district intermediate schools. Seven of the district's elementary schools had enrollments over 90% military dependents. Of the military services, the Navy/Marine Corps had the most dependents in Hawai'i public schools (7743), with the Army a close second (6156) and the Air Force (2440) and Coast Guard (357) a distant third and fourth, respectively. The complete database arranged alphabetically by district can be found in Appendix A. Subsets by school type ordered by percentage of military enrollment are included as tables later in this section and in Appendix B.

TABLE 2. *Number of schools with federal dependents by type and location for school year 1997-98*

Type of School	Number of schools with federal dependents (Number of schools without federal dependents) by district							
	Central	Leeward	Windward	Honolulu	Kaua'i	Maui	Big Island	Total
E: elementary	29	29	23	38 (2)	10	10 (8)	14 (5)	153 (15)
E/I: Elementary and intermediate			1				3 (3)	4 (3)
I: intermediate	5	4	2			3 (2)	2 (1)	16 (3)
M: middle				9	1		(1)	10 (1)
H/I: intermediate and high	1	1	1		2	(1)	3	8 (1)
H/E: elementary and high					(1)	1 (1)	2	3 (2)
H: high school	5	4	3	6	1	3 (1)	3 (1)	25 (2)

Schools in Hawai'i are organized in a variety of different ways, and DOD dependents are part of nearly all types of schools. Table 2 describes the types of schools and number by district and indicates how many of each have federally connected students enrolled. All O'ahu schools have some percentage of federally connected students enrolled. Seven schools in the Maui district have no federally connected students; this includes the schools on Moloka'i and Lana'i. Nine schools on the Big Island of Hawai'i have no federal or DOD dependents enrolled; Ni'ihau in the Kaua'i district has none.

Schools with Higher Proportions of Federally Connected Pupils

Tables in Appendix B list schools in order of the percentage of enrollment that is military dependents; schools with no federal or DOD dependents are not listed. The first lists regular high schools (H). The second lists intermediate and middle schools (I, M). The third lists elementary schools (E). Multi-level schools (H/I, H/E, E/I) are not included in these ranked lists but can be found on the master list in Appendix A. Excerpts from the ranked lists are in Table 3.

In Table 3 are listed in order the schools with the highest percentages of military dependents in school year 1997–98. These include the 8 high schools and 8 intermediate/middle schools with the highest percentages of military dependents (4% to 63% and 2% to 57%, respectively) and 15% or more total federal dependents enrolled, as well as 32 elementary schools with the highest percentages of military dependents (6% to 100%) and over 25% total federal dependents enrolled. The 8 high schools enrolled 96% (2533 students) of the 2637 military dependents in Hawai'i's public high schools (grades 9–12) and 79% (4510 students) of the 5684 federal dependents in the public high schools. The 8 intermediate schools listed in Table 3 enrolled 96% (1843) of the 1914 military dependents in Hawai'i's public intermediate (grades 7–8) and middle (grades 6–8) schools and 83% (2718) of the 3290 federal dependents in those types of schools. The 32 elementary schools enrolled 94% (11,384) of the 12,106 military dependents in Hawai'i public elementary schools (grades K–5 and grades K–6) and 77% (13,302) of all 17,213 federal dependents in the public elementary schools during 1997–98.

The schools in Table 3 were selected for further analysis and description to help characterize the schools where a large percentage of DOD dependents attend. Additional information is provided for each of these schools individually. Located in Appendix C for each of the schools listed in Table 3 is the *School Status and Improvement Report* (SSIR) for the school for school year 1997–98. The SSIRs and other data related to school climate and risk of violence and disorder in DOE schools for the past 3 years were summarized to produce the results in Tables 4, 5, and 6.

TABLE 3. *Hawai'i public schools with the greatest proportion of Department of Defense connected students enrolled during school year 1997–98 listed in order of percentage of military dependents*

High schools (H) with over 15% total federal dependents and military dependents from 63% to 4%[a] (district)	Intermediate/Middle (I/M) schools with over 15% total federal dependents and military dependents from 57% to 2%[b] (district)	Elementary schools (E) with over 25% federal dependents and military dependents from 100% to 6%[c] (district)
Radford (Central)	Aliamanu Inter (Central)	Soloman (Central)
Leilehua (Central)	Wahiawa Inter (Central)	Hale Kula (Central)
Kalaheo (Windward)	Moanalua Inter (Central)	Mokulele (Central)
Moanalua (Central)	'Ilima Inter (Leeward)	Nimitz (Central)
Campbell (Leeward)	Wheeler Inter (Central)	Pearl Harbor Kai (Central)
Mililani (Central)	Kailua Inter (Windward)	Hickam (Central)
Pearl City (Leeward)	Highlands Inter (Leeward)	Shafter (Central)
'Aiea (Central)	'Aiea Inter (Central)	Iroquois Point (Leeward)
		Barber's Point (Leeward)
		Mokapu (Windward)
		Wheeler (Central)
		Lehua (Leeward)
		Aliamanu (Central)
		Red Hill (Central)
		Makalapa (Central)
		Pearl Harbor (Central)
		Helemano (Central)
		Webling (Central)
		Pearl City (Leeward)
		Moanalua (Central)
		Wahiawa (Central)
		Mililani-Uka (Central)
		Mauka Lani (Leeward)
		Mililani-Waena (Central)
		Scott (Central)
		Kekaha (Kaua'i)
		'Aikahi (Windward)
		Holomua (Leeward)
		Kipapa (Central)
		Kalei'opu'u (Leeward)
		Pearl Ridge (Central)
		Mililani-Mauka (Central)

[a]These 8 high schools enrolled 96% of all military dependents in Hawai'i public high schools in 97–98. [b]These 8 intermediate/middle schools enrolled 96% of all military dependents in Hawai'i public intermediate and middle schools in 97–98. [c]These 32 elementary schools enrolled 94% of military dependents in Hawai'i public elementary schools in 97–98

Measures of Risk for Disorder and Violence

From the SSIRs (Appendix C) and other background and offense data for DOE schools for the past 3 school years, the following variables were selected as possible indicators of risk for disorder and violence in the schools: (a) school size (enrollment); (b) the percentage of students getting free or reduced price lunch, as a measure of socio-economic status; (c) the percentage of students with limited English proficiency (SLEP); (d) average daily attendance; (e) graduation/completion rate (for high schools); (f) the percentage of favorable responses from students to items on the Effective Schools Survey (ESS) dealing with home-school relations and learning climate; and (g) offense rates for violent offenses, property offenses, weapons offenses, drug offenses, deportment offenses, and other offenses. Mean percentages and rates were calculated for each of the last 3 school years for the high schools, intermediate/middle schools, and elementary schools with the greatest proportions of DOD-connected students (those listed in Table 3). These means were compared to the state means for the same variables each year. The results are presented by school level in Tables 4, 5, and 6.

High School Results

In Table 4 the results for high schools show that the average enrollment of the eight high schools with the highest proportions of DOD-connected students exceeded the state mean high school enrollment by over 100 students for each of the last 3 years. DOD-connected students in general attend large, urban high schools in Hawai'i. On the risk factors reflecting socio-economic status (SES), students with limited English proficiency (SLEP), attendance, and graduation/completion rate, the high schools with the highest proportions of DOD-connected students compare favorably in each case with state averages: smaller percentages of students receiving free or reduced price lunch, smaller percentages of students with limited English proficiency, better average daily attendance, and higher graduation/completion rates.

On the Effective Schools Survey items dealing with home-school relations and those dealing with learning climate at the school, the high-DOD schools showed mixed results. Those schools surveyed in school year 1996–97 showed mean results within 2% of the state averages on those items with a narrower range of responses than the state range, indicating that the high-DOD school students had much the same perception and fewer extreme views of their home-school relations and school learning climate as other high school students in Hawai'i. Those high-DOD schools surveyed in 1997–98, however, responded much less positively about their home-school relations and school learning climate than the state average and included results at or near the minimum values in the range of state responses, indicating that at those particular high-DOD schools, a much lower proportion of students had positive views about their home-schools relations and the school learning climate than did high school students statewide.

TABLE 4. *Mean percentages and rates on measures of risk for disorder and violence for eight public high schools with the highest proportions of DOD-connected students compared to state means for SY 96-97, 97-98, and 98-99*

		DOD-connected schools		Comparable public schools (grades 9–12)	
MEASURES OF RISK FOR DISORDER	Year	Low to high	Mean	Low to high	Mean
BACKGROUND					
Number of comparable schools	1996–97	8		26	
	1997–98	8		28	
	1998–99	8		28	
September enrollment	1996–97	1180–2285	1794	701–2379	1689
	1997–98	1220–2210	1806	402–2431	1644
	1998–99	1222–2314	1791	779–2500	1645
Percentage of enrollment receiving free/reduced lunch	1996–97	7.1–22.7%	14.2%	5.5–45.0%	21.7%
	1997–98	8.2–27.5%	15.9%	6.8–42.0%	24.0%
	1998–99	8.2–27.1%	16.3%	6.9–50.8%	26.0%
Percentage of enrollment with limited English proficiency (SLEP)	1996–97	1.6–8.1%	4.8%	1.0–20.4%	6.3%
	1997–98	1.9–7.2%	4.4%	1.5–21.5%	6.1%
	1998–99	1.6–9.1%	5.8%	1.6–25.4%	7.9%
Percentage federal dependents	1997–98	18.9–71.1%	32.2%	0–71.1%	13.3%[a]
Military dependents	1997–98	3.6–62.7%	19.2%	0–62.7%	5.7%[a]
Non-military dependents	1997-98	6.0–23.3%	11.7%	0–23.3%	7.6%[a]
Average daily attendance	1996–97	86.5–95.0%	92.2%	80.1–97.3%	90.6%
	1997–98	86.4–96.0%	92.4%	71.7–98.0%	90.5%
	1998–99	87.4–95.7%	92.0%	86.5–98.1%	90.9%
Graduation/completion rate	1996–97	92.3–98.8%	96.5%	87.5–99.4%	94.9%
	1997–98	91.8–98.6%	96.5%	84.6–100%	95.8%
	1998–99	95.0–100%	97.1%	85.2–100%	95.2%
Effective Schools Survey: % of positive student responses to home-school relations items[b]	1996–97	31.0–35.0% (5)	32.0%	22.0–35.0%	30.0%
	1997–98	22.4–26.6% (2)	24.5%	20.4–40.0%	28.3%
Effective Schools Survey: % of positive student responses to learning climate items[b]	1996–97	28.0–35.0% (5)	31.0%	25.0–45.0%	31.9%
	1997–98	17.8–24.7% (2)	21.3%	17.8–42.4%	29.0%

[a]State means include low rent housing pupils and are thus over estimates of the actual state mean percentages of federal dependents in schools. [b]The Effective Schools Survey is conducted on a rotating schedule, approximately every three or four years at any given school. Numbers in parentheses indicate the number of schools in the calculation.

TABLE 4 (continued). *Mean percentages and rates on measures of risk for disorder and violence for eight public high schools with the highest proportions of DOD-connected students compared to state means for SY 96-97, 97-98, and 98-99*

MEASURES OF RISK FOR DISORDER	Year	DOD-connected schools Low to high	DOD-connected schools Mean	Comparable public schools (grades 9–12) Low to high	Comparable public schools (grades 9–12) Mean
OFFENSES RESULTING IN SUSPENSIONS					
	1996–97	0.5–2.4	1.1	0.1–3.0	1.3
Rate of violent offenses[c]	1997–98	0.3–3.3	1.2	0.2–4.1	1.3
	1998–99	0.1–1.3	0.8	0.1–2.4	0.8
	1996–97	0.1–0.6	0.3	0.0–1.6	0.5
Rate of property offenses[c]	1997–98	0.2–0.4	0.3	0.1–1.5	0.6
	1998–99	0.0–0.7	0.3	0.0–1.2	0.4
	1996–97	0.1–0.4	0.2	0.0–0.5	0.2
Rate of weapons offenses[c]	1997–98	0–0.8	0.3	0.0–1.2	0.3
	1998–99	0.1–0.4	0.2	0.0–0.5	0.2
	1996–97	2.3–9.9	5.4	1.0–17.7	5.7
Rate of drug offenses[c]	1997–98	1.4–9.7	4.3	1.1–17.4	5.2
	1998–99	1.7–7.2	4.4	0.3–13.2	4.1
	1996–97	5.9–14.9	10.9	2.7–43.9	14.4
Rate of deportment offenses[c]	1997–98	4.9–14.1	9.5	2.4–42.0	12.9
	1998–99	2.7–17.0	9.5	0.7–30.4	9.8
	1996–97	0.2–8.9	2.9	0.1–12.4	3.8
Rate of other offenses[c]	1997–98	0.4–6.6	2.1	0.1–10.1	2.5
	1998–99	0.2–3.2	1.6	0.1–6.6	1.9

[c]Rate is the number of offenses per 100 students enrolled. A rate of 2.1 means the school has slightly more than 2 offenses per 100 students.

With one notable exception, offense rates at high-DOD schools were generally below and a few times at the state means; they were not usually at the minima, but were never at the maxima of the state ranges. The notable exception was drug offenses, where the high-DOD school offense rate for 1998–99 was 4.4 compared to the state rate of 4.1 drug offenses per 100 students in a school. Five of the eight high-DOD schools exceeded the state average drug offense rate last year; four of those five exceeded the state average in 96–97 and one of those in 97–98 as well. The most frequent drug offense involved in suspensions at these schools was smoking. Last school year an average of 78% of these five schools' drug offenses resulting in suspensions were smoking offenses; 16% were marijuana offenses. Other illegal drug offenses accounted for 5% or less of any of these schools' drug offenses, and alcohol accounted for 6% or less.

Intermediate and Middle School Results

Results of the analysis of risk for disorder and violence for intermediate and middle schools with high proportions of DOD dependents are in Table 5. On risk factors/indicators of size, SES, SLEP, and attendance, the intermediate/middle school results mirror those for the high schools with high proportions of DOD dependents. They all compare favorably with the state averages, generally showing lower risk for and indications of disorder and violence than the average Hawai'i intermediate school (grades 7–8). (There were no middle schools, grades 6–8, in the group of schools with the highest proportions of DOD-connected students.). High-DOD intermediate schools had a larger average enrollment (by about 50 students) than the state average for intermediate schools. Although the average percentage of enrollment receiving free or reduced lunch was less than the state average at high-DOD intermediate schools, over a quarter of the student population, on average, at these schools qualified for this benefit by virtue of their low SES; the range of percentages of this low SES indicator was from about 15 to 50%.

Unlike the mixed results for the high schools, the intermediate schools had results consistently below state averages on the Effective Schools Survey items. At high-DOD intermediate schools, students' perceptions of their schools' home-school relations and learning climates lagged behind state averages from about 2 to 5 percentage points and almost always included the minimum value in the state range. This indicates that students at one or more high-DOD schools gave the state's least number of positive responses to questions about their schools' home-school relations and learning climate. None of the high-DOD schools reached the maximum values in the range for state responses. Overall, students at high-DOD intermediate schools had a lower opinion of their schools on these school climate variables than did students statewide.

In terms of the rate of offenses leading to suspensions in high-DOD intermediate schools, these schools generally showed rates below and a few times at the state average. The range at high-DOD intermediate schools nearly always contained the state minimum value. In 5 of the 18 comparisons, the range at the high-DOD schools was the same as the state range, containing both the minimum and the maximum values. For 3 of those comparisons, the high-DOD school mean exceeded the state mean by two or three tenths: 97–98 rate of violent offenses (1.7 compared to 1.5 statewide), 96–97 rate of weapons offenses (0.7 compared to 0.5 statewide), and 98–99 rate of other offenses (3.9 compared to 3.6 statewide). These differences are small and show no consistent pattern.

TABLE 5. *Mean percentages and rates on measures of risk for disorder and violence for eight intermediate and middle schools with the highest proportions of DOD-connected students compared to state means for SY 96-97, 97-98, and 98-99*

MEASURES OF RISK FOR DISORDER	Year	DOD-connected schools: Low to high	DOD-connected schools: Mean	Comparable public schools (grades 7–8): Low to high	Comparable public schools (grades 7–8): Mean
BACKGROUND					
Number of comparable schools	1996–97	8		13	
	1997–98	8		13	
	1998–99	8		13	
September enrollment	1996–97	759–1322	1008	225–1322	957
	1997–98	719–1412	1012	227–1412	958
	1998–99	653–1416	986	229–1416	931
Percentage of enrollment receiving free/reduced lunch	1996–97	14.5–44.8%	24.8%	14.5–68.2%	34.2%
	1997–98	15.7–50.3%	27.4%	15.7–65.3%	35.8%
	1998–99	18.8–47.6%	28.5%	18.8–74.1%	37.6%
Percentage of enrollment with limited English proficiency (SLEP)	1996–97	1.5–6.6	4.1	1.0–14.7%	4.8%
	1997–98	1.7–7.8	4.7	1.3–15.0%	5.2%
	1998–99	2.5–11.3	6.3	1.6–20.7%	6.6%
Percentage federal dependents	1997–98	15.4–61.0%	33.4%	0–71.1%	26.0%[a]
Military dependents	1997–98	3.1–57.1%	22.6%	0–62.7%	15.4%[a]
Non-military dependents	1997–98	3.8–20.5%	10.7%	0–23.3%	10.6%[a]
Average daily attendance	1996–97	92.3–95.9	94.2	87.5–95.9%	93.5%
	1997–98	92.2–96.2	94.5	89.9–96.2%	93.8%
	1998–99	92.4–96.1	94.2	91.7–96.1%	93.8%
Effective Schools Survey: % of positive student responses to home-school relations items[b]	1996–97	24.0–37.0% (5)	29.8%	24.0–39.0%	31.7%
	1997–98	26.5–34.9% (2)	30.7%	26.5–40.3%	35.3%
Effective Schools Survey: % of positive student responses to learning climate items[b]	1996–97	21.0–30.0% (5)	22.2%	15.0–48.0%	27.3%
	1997–98	23.5-24.3% (2)	23.9%	23.5–34.4%	28.1%

[a]Unlike the other percentages in this category, the state means include low rent housing pupils and are thus over estimates of the actual state mean percentages of federal dependents in schools. [b]The Effective Schools Survey is conducted on a rotating schedule, approximately every three or four years at any given school. Numbers in parentheses indicate the number of schools in the calculation.

TABLE 5 (continued). *Mean percentages and rates on measures of risk for disorder and violence for eight intermediate and middle schools with the highest proportions of DOD-connected students compared to state means for SY 96-97, 97-98, and 98-99*

MEASURES OF RISK FOR DISORDER	Year	DOD-connected schools Low to high	DOD-connected schools Mean	Comparable public schools (grades 7–8) Low to high	Comparable public schools (grades 7–8) Mean
OFFENSES RESULTING IN SUSPENSIONS					
	1996–97	0.3–3.6	1.8	0.3–3.8	1.8
Rate of violent offenses[c]	1997–98	0.4–4.6	1.7	0.4–4.6	1.5
	1998–99	0.1–2.7	1.6	0.0–4.1	1.7
	1996–97	0.5–3.4	2.3	0.5–3.6	2.3
Rate of property offenses[c]	1997–98	0.6–1.5	1.2	0.6–4.4	1.4
	1998–99	0.0–3.5	1.4	0.0–3.5	1.5
	1996–97	0.0–1.2	0.7	0.0–1.2	0.5
Rate of weapons offenses[c]	1997–98	0.0–1.3	0.5	0.0–2.0	0.6
	1998–99	0.1–0.9	0.5	0.0–1.0	0.5
	1996–97	0.4–3.6	2.2	0.0–4.2	2.4
Rate of drug offenses[c]	1997–98	1.5–3.4	2.0	1.5–6.7	3.0
	1998–99	0.4–2.9	1.7	0.4–4.3	2.3
	1996–97	2.8–22.6	12.1	2.8–53.5	17.4
Rate of deportment offenses[c]	1997–98	5.9–19.2	10.5	5.9–31.4	15.1
	1998–99	4.6–21.4	10.9	4.6–27.0	14.6
	1996–97	0.5–9.5	4.3	0.0–29.4	6.3
Rate of other offenses[c]	1997–98	0.3–17.4	4.8	0.3–17.4	5.6
	1998–99	0.7–11.7	3.9	0.7–11.7	3.6

[c]Rate is the number of offenses per 100 students enrolled. A rate of 2.1 means the school has slightly more than 2 offenses per 100 students.

Comparison of High School and Intermediate School Results

Generally, the high-DOD intermediate schools showed a wider range of risk for disorder and violence than did the high-DOD high schools, as indicated by the broader range of values of offense rates in most of the categories relative to the state ranges and relative to the high-DOD high school ranges. The exception to that generalization is for drug offenses where there is greater variability in rates at the high school level among both the high-DOD high schools and the high schools statewide. There also appears to be either a problem with more smoking among students at high-DOD high schools than statewide or a more vigorous enforcement effort against smoking violations in high-DOD high schools than in high schools statewide.

It also appears that the rate of weapons offenses was a bit higher at the high-DOD high schools and intermediate schools for one year each; however, the actual number of weapons offenses is so low that any one incident can have an inordinate effect on the overall rate. These rates must be interpreted with care and comparisons used as only very rough indicators of real differences in school environments. Given those limitations, there is little evidence that high-DOD high schools or intermediate schools are at more risk for disorder and violence than other schools in Hawai'i based on the patterns of offenses leading to suspensions over the last 3 years.

Furthermore, the high schools and intermediate schools with the highest proportions of DOD-connected students appear to have had better attendance and less of the risk associated with high percentages of low SES and SLEP students, although the average of 25% or more students receiving free or reduced lunch at the high-DOD intermediate schools is an indicator of some risk associated with low SES. The one obvious risk factor for both high-DOD high schools and intermediate schools is the larger average school size, and the other indicators that showed troubling results were the low percentages of positive responses from students about their schools' home-school relations and learning climate.

Elementary School Results

Table 6 lists results of the analysis of risk factors and indicators of disorder and violence for the 32 elementary schools with the highest proportion of DOD dependents. Like the high-DOD high schools and intermediate schools, the high-DOD elementary schools had a substantially larger average enrollment (by over 130 students each year) than the state average for elementary schools. They had lower percentages of students receiving free or reduced price lunch and of limited English proficiency (SLEP), and they had higher average daily attendance than the statewide averages. Although lower than the state average of about 45%, the 35% average of percentage of enrollment receiving free or reduced price lunch at the high-DOD elementary schools indicates some risk associated with low SES on these campuses. On the Effective Schools Survey, the high-DOD elementary school students' responses to items about home-school relations mirrored the statewide responses, with nearly the same average and range. The average responses to the items on learning climate, however, lagged 3 to 4% behind the state averages.

The average rates of offenses leading to suspensions in all categories were low for the high-DOD elementary schools—at or below the statewide averages, with maxima considerably less than the state maximum values for all offenses for all 3 years. During the school year 1997–98, of the 32 elementary schools with the highest proportions of DOD dependents, 6 had no offenses leading to suspensions. One of them, however, had 53 suspensions. In general, though, the offense data do not indicate a greater risk for disorder and violence among the DOD-connected students in these schools relative to the rest of Hawai'i's public elementary schools.

TABLE 6. *Mean percentages and rates on measures of risk for disorder and violence for 32 elementary schools with the highest proportions of DOD-connected students compared to state means for SY 96-97, 97-98, and 98-99*

MEASURES OF RISK FOR DISORDER	Year	DOD-connected schools: Low to high	DOD-connected schools: Mean	Comparable public schools (grades K–6): Low to high	Comparable public schools (grades K–6): Mean
BACKGROUND					
Number of comparable schools	1996–97	32		127	
	1997–98	32		126	
	1998–99	32		126	
September enrollment	1996–97	346–1268	749	90–1621	607
	1997–98	340–1257	757	90–1628	603
	1998–99	311–1074	724	83–1489	591
Percentage of enrollment receiving free/reduced lunch	1996–97	4.7–64.2	35.0%	3.0–87.3%	44.2%
	1997–98	3.7–77.0	34.9%	3.7–94.3%	45.3%
	1998–99	3.9–70.2	35.8%	3.9–89.5%	46.3%
Percentage of enrollment with limited English proficiency (SLEP)	1996–97	0.7–17.3%	4.6%	0–27.5%	5.9%
	1997–98	0.5–20.6%	4.9%	0–23.9%	5.7%
	1998–99	0.8–22.3%	7.3%	0–33.7%	8.2%
Percentage federal dependents	1997–98	17.2–104.8%[b]	54.4%	0.3–104.8%[b]	20.8%[a]
Military dependents	1997–98	5.7–103.9%[b]	46.7%	0.0–103.9%[b]	13.2%[a]
Non-military dependents	1997–98	0.2–20.1%	7.8%	0.2–40.6%	7.6%[a]
Average daily attendance	1996–97	94.3–96.9%	95.5%	89.4–97.1%	94.4%
	1997–98	92.0–96.6%	95.5%	87.5–97.0%	94.5%
	1998–99	92.6–96.6%	95.6%	90.9–97.0%	94.8%
Effective Schools Survey: % of positive student responses to home-school relations items[c]	1996–97	48.0–81.0% (22)	64.0%	48.0–85.0%	64.5%
	1997–98	56.0–72.0% (8)	64.0%	53.1–81.5%	65.9%
Effective Schools Survey: % of positive student responses to learning climate items[c]	1996–97	35.0-81.0% (22)	53.0%	35.0–81.0%	56.6%
	1997–98	44.4–72.4% (8)	59.8%	44.4–90.8%	64.1%

[a]Unlike the other percentages in this category, the state means include low rent housing pupils and are thus over estimates of the actual state mean percentages of federal dependents in schools. [b]The percentages exceeding 100% are an artifact of counting enrollment and federally connected students at different times of the year. [c]The Effective Schools Survey is conducted on a rotating schedule, approximately every three or four years at any given school. Numbers in parentheses indicate the number of schools in the calculation.

TABLE 6 (continued). *Mean percentages and rates on measures of risk for disorder and violence for 32 elementary schools with the highest proportions of DOD-connected students compared to state means for SY 96-97, 97-98, and 98-99*

MEASURES OF RISK FOR DISORDER	Year	DOD-connected schools Low to high	DOD-connected schools Mean	Comparable public schools (grades K–6) Low to high	Comparable public schools (grades K–6) Mean
OFFENSES RESULTING IN SUSPENSIONS					
Rate of violent offenses[d]	1996–97	0.0-1.6	0.3[e]	0.0-6.4	0.4
	1997–98	0.0-1.0	0.2[f]	0.0-10.2	0.3
	1998–99	0.0-1.1	0.2[g]	0.0-11.4	0.3
Rate of property offenses[d]	1996–97	0.0-0.7	0.2[e]	0.0-3.4	0.2
	1997–98	0.0-0.7	0.1[f]	0.0-4.2	0.2
	1998–99	0.0-1.8	0.2[g]	0.0-3.2	0.2
Rate of weapons offenses[d]	1996–97	0.0-0.4	0.1[e]	0.0-0.5	0.1
	1997–98	0.0-0.5	0.0[f]	0.0-2.1	0.1
	1998–99	0.0-0.3	0.0[g]	0.0-0.4	0.0
Rate of drug offenses[d]	1996–97	0.0-0.3	0.0[e]	0.0-7.9	0.2
	1997–98	0.0-0.6	0.0[f]	0.0-0.8	0.0
	1998–99	0.0-0.3	0.0[g]	0.0-1.0	0.0
Rate of deportment offenses[d]	1996–97	0.0-7.0	1.6[e]	0.0-51.4	2.7
	1997–98	0.0-6.6	0.0[f]	0.0-46.9	2.1
	1998–99	0.0-7.2	1.3[g]	0.0-42.7	2.1
Rate of other offenses[d]	1996–97	0.0-1.5	0.2[e]	0.0-5.8	0.4
	1997–98	0.0-1.3	0.2[f]	0.0-3.4	0.2
	1998–99	0.0-0.7	0.1[g]	0.0-1.9	0.2

[d]Rate is the number of offenses per 100 students enrolled. A rate of 2.1 means the school has slightly more than 2 offenses per 100 students. [e]Missing offense data for some of the 32 elementary schools: $n = 27$. [f]$n = 31$. [g]$n = 25$.

Correlation Analyses

Pearson Product-Moment correlation coefficients were calculated among the following variables using data for school year 1997–98: the percentage of enrollment that was federal dependents (military, nonmilitary, and total) by school, the offense rate per 100 students for each of the six categories of offenses reported by school, and school size (official September enrollment by school). Analyses were done for each of the three levels of schools, elementary, intermediate/middle, and high schools; multi-level schools were not included in the first analysis nor were the few schools that did not appear in the database because they had no federally connected students of any type enrolled (missing 1

of 28 high schools, 2 of 30 intermediate and middle schools, and 9 of 168 elementary schools in the state). Results appear in Tables 7 and 8.

None of the correlations between percentage of federal dependents enrolled in a school and each of the six offense rates by school reached statistical significance at conventional levels ($p < .05$). There appear then to be weak, if any, linear relationships between the proportion of federal dependents in a school and the rates of commission of offenses leading to suspension.

Hawai'i's schools tend to be large (more on this in the section on the "Quality Counts 2000" Report). At the high school level (grades 9–12) in 1997–98, the 27 schools included in this analysis ranged in size from 402 to 2431 students, with a mean size of 1659 and a median size of 1793. By most measures nearly all of Hawai'i's high schools are big schools: only 3 of 27 high schools had fewer than 1000 students. The range for the 28 intermediate and middle schools in this study was 482 to 1412 students, with a mean size of 897 and a median of 946. Again, these are big schools. Of the 159 elementary schools analyzed, 10 had enrollments over 1000 in 1997–98 (the highest 1628); of these 10, 5 of them were among the 32 elementary schools with the highest percentages of military dependents. The correlation coefficients between school size and proportion of federal dependents can be found in Table 8.

At the elementary school level there is a small, statistically significant positive correlation between school size and percentage of military dependents enrolled ($r = .236$, $p < .01$) and between school size and percentage of total federal dependents enrolled in a school ($r = .265$, $p < .001$). At the intermediate/middle school level, the correlations for all groups and school size are modest and positive, but none reach statistical significance at the conventional levels. The same is true of the modest positive correlation ($r = .320$, *ns*) between school size and percentage of non-military federal dependents at the high school level. When all schools, including multi-level schools, are included, there is a very small, statistically significant, positive relationship ($r = .172$, $p < .01$) between school size and percentage of non-military federal dependents enrolled (see Table 8).

TABLE 7. *Pearson Product-Moment correlation coefficients between percentages of federal dependents enrolled and school offense rates[a] for each of six categories of offenses*

Federal dependents	Violent offenses rate *r*	Property offenses rate *r*	Weapons offenses rate *r*	Drug offenses rate *r*	Deport-ment offenses rate *r*	Other offenses rate *r*
Elementary (E) $N = 113$[b]						
% Military only	− .018	− .160	− .035	− .054	− .092	− .146
% Nonmilitary only	− .010	− .022	− .075	− .061	− .096	− .063
% All federal dependents	− .020	− .164	−.048	− .065	− .109	− .158
Intermediate/Middle (I/M) $N = 27$[c]						
% Military only	− .108	+ .046	+ .075	− .082	+ .114	+ .027
% Nonmilitary only	+ .236	+ .203	− .133	+ .014	+ .143	+ .077
% All federal dependents	− .016	+ .104	+ .022	− .065	+ .142	+ .047
High Schools (H) $N = 26$[d]						
% Military only	− .142	−.095	+ .253	− .274	+ .167	− .063
% Nonmilitary only	+ .246	− .154	− .064	+ .003	+ .322	+ .241
% All federal dependents	− .026	− .137	+ .186	− .227	+ .260	+ .038

Note. None of the correlations reached statistical significance at the conventional .05 level.
[a]Offense rates are number of offenses per 100 students enrolled at a school. [b]Elementary schools missing offense data = 46 (missing data could indicate no suspensions at the school or late submission of data). [c]Intermediate/middle schools missing offense data = 1. [d]High schools missing offense data = 1.

TABLE 8. *Pearson Product-Moment correlation coefficients between percentages of federal dependents enrolled in a school and school size*

School Level	% Military only *r*	% Non-military only *r*	% All federal dependents *r*
Elementary (E) *N* = 159	+ .236**	– .159*	+ .265***
Intermediate (I) & Middle (M) *N* = 28	+ .245	+ .326	+ .312
High (H) *N* = 27	– .007	+ .320	+ .115
All Schools (E, I, H, H/I, H/E, E/I) *N* = 229	+ .044	+ .172**	+ .080

*$p < .05$. **$p < .01$. ***$p < .001$.

Results From the Youth Risk Behavior Surveys (YRBS)

Because of careful sampling coupled with statistical weighting to reduce bias and compensate for patterns of nonresponse, data from the Hawai'i Middle School and High School Youth Risk Behavior Surveys administered during spring 1997 can be used to make inferences about the priority risk behaviors of all Hawai'i public school students in grades 6–8 and 9–12 (Saka & Lai, 1998a, 1998b). Of particular interest to this study were student responses to items about injury and violence and tobacco, alcohol, and other drug use. Results in Table 9 include the frequencies of responses on those 45 items for students in Hawai'i middle schools, Hawai'i high schools, and U.S. high schools, as well as the relative rank of Hawai'i high school responses compared to the other states and territories with weighted YRBS data (24 states and 3 territories). The data reveal many positive findings about youth risk behaviors in Hawai'i but also raise concerns in several areas, among them unsafe school campuses, early use of marijuana, and suicide ideation.

Of particular note in these results are that high school students in Hawai'i ranked first among other states with weighted results in being least likely to carry weapons (14.1% compared to 18.3%) and third in being least likely to carry weapons on school property (6.1% compared to 8.5%). Hawai'i middle school students, however, were more likely to carry guns (7.5%) and weapons other than guns (20.5%) than Hawai'i and U.S. high school students and as likely as U.S. high school students to carry weapons on school property. Both middle and high school students in Hawai'i reported feeling too

unsafe to go to school (6% and 5.6%) more often than U.S. high school students (4%). Fifty percent of Hawai'i middle school students reported having property stolen or deliberately damaged on school property, more than both Hawai'i (33.5%) and U.S. (32.9%) high school students. Over 40% of middle school students reported being in a physical fight in the last year (42.5%), again more than both Hawai'i (31.7%) and U.S. (36.6%) high school students. Higher percentages of Hawai'i middle and high school students reported engaging in risk behaviors related to suicide than did U.S. high school students.

Overall risk associated with tobacco was less than or the same for Hawai'i middle and high schools students compared to U.S. high school students, although middle school students in Hawai'i reported more often that they began smoking before age 13 (35.4%). And Hawai'i high school students were slightly more likely to have smoked cigarettes on school property in the past 30 days (16%) than their U.S. counterparts (14.6%).

Hawai'i high school students ranked in the top five of the states with weighted results in being least likely to have ever used alcohol, illegal steroids, inhalants, or illegal injected drugs, or to have drunk alcohol in the past 30 days. They ranked in the bottom, however, in reporting drinking alcohol or using marijuana on school property (8.5% and 12.6%, respectively), trying marijuana before age 13 (14.4%), or being offered, sold, or given an illegal drug on school property (41.4%). And, although the percentage of Hawai'i high school students who reported having five or more drinks in a row in the past 30 days was below the U.S. high school figure of 33.4%, a disturbing 25.1% of Hawai'i high school youth reported binge drinking.

Hawai'i middle school students, too, first tried marijuana before age 13 at the same higher rate as Hawai'i high school students (14.8%); they also reported having had their first drink of alcohol before age 13 (44.2%) more frequently than Hawai'i (31.7%) and U.S. (31.1%) high school students. And 20% of middle school students reported being offered, sold, or given illegal drugs on school property.

TABLE 9. *1997 Youth Risk Behavior Survey: Hawai'i Middle Schools[a], Hawai'i High Schools[b], U.S. High Schools[c], and Hawai'i High School state rank[d]*

Injury and violence	Hawai'i middle schools %	Hawai'i high schools %	U.S. high schools %	Hawai'i high school state rank
1. Never or rarely wore a seatbelt riding with others	13.0	14.6	19.3	5/27
2. Motorcycle riders who never or rarely wore helmet	NA[e]	68.1	36.2	23/24
3. Bicycle riders who never or rarely wore helmet	65.5	93.9	88.4	19/27
4. Rollerbladers who never or rarely wore helmet	54.7	NA	NA	NA
5. Skateboarders who never or rarely wore helmet	25.2	NA	NA	NA
6. Rode with a drinking driver in past 30 days	26.7	36.1	36.6	13/27
7. Drove when drinking in past 30 days	NA	10.3	16.9	6/27
8. Carried a weapon, such as a gun, knife, or club in past 30 days	20.5 Besides a gun	14.1	18.3	1/26
9. Carried a gun during past 30 days	7.5	4.1	5.9	1/26
10. Carried a weapon on school property in past 30 days	7.8	6.1	8.5	3/27
11. Felt too unsafe to go to school in past 30 days	6.0	5.6	4.0	17/27
12. Threatened or injured with a weapon on school property in past 12 months	NA	6.3	7.4	3/27
13. Property stolen or deliberately damaged on school property in past 12 months	51.2	33.5	32.9	18/26
14. Were in physical fight in past 12 months	42.5	31.7	36.6	4/27
15. Were injured in a physical fight and treated by doctor/nurse during past 12 months	2.8	3.1	3.5	6/27
16. Were in physical fight on school property in past 12 months	23.0	12.9	14.8	6/27
17. Seriously considered attempting suicide in past 12 months	28.8 In lifetime	26.9	20.5	25/27
18. Made a suicide plan in past 12 months	16.7 In lifetime	20.1	15.7	22/26
19. Attempted suicide in past 12 months	12.3 In lifetime	11.5	7.7	24/26
20. Suicide attempt required medical attention in past 12 months	4.4 In lifetime	4.0	2.6	24/27

Note. Source of data: Pateman, Saka, & Lai, 2000, pp. 47–49.
[a]Hawai'i middle schools, grades 6–8, n = 1450. [b]Hawai'i high schools, grades 9–12, n = 1409. [c]United States high schools, grades 9–12, n = 16,262. [d]Hawai'i rank among states having weighted YRBS data. [e]NA = not available.

TABLE 9 (continued). *1997 Youth Risk Behavior Survey: Hawai'i Middle Schools[a], Hawai'i High Schools[b], U.S. High Schools[c], and Hawai'i High School state rank[d]*

	Tobacco use	Hawai'i middle schools %	Hawai'i high schools %	U.S. high schools %	Hawai'i high school state rank
21.	Ever tried cigarette smoking in lifetime	49.9	67.4	70.2	4/25
22.	First smoked a cigarette before age 13	35.4	25.6	24.8	13/27
23.	Smoked cigarettes in past 30 days	20.1	29.2	36.4	3/27
24.	Current cigarette smokers who purchased cigarettes at a store or gas station in past 30 days	1.5 In a store	24.9	29.8	16/25
25.	Current cigarette smokers who were not asked to show proof of age when purchasing cigarettes in a store in past 30 days	3.7	65.0	66.7	14/22
26.	Smoked cigarettes on school property in past 30 days	7.1	16.0	14.6	11/27
27.	Used chewing tobacco or snuff in past 30 days	4.0	3.4	9.3	2/27
28.	Used chewing tobacco or snuff on school property in past 30 days	NA	1.9	5.1	2/26
	Alcohol and other drug use				
29.	Had first drink of alcohol before age 13	44.2	31.7	31.1	13/27
30.	Ever drank alcohol in lifetime	50.1	72.5	79.1	4/24
31.	Drank alcohol in past 30 days	23.7	40.3	50.8	4/27
32.	Had five or more drinks in a row in past 30 days	8.7	25.1	33.4	7/27
33.	Drank alcohol on school property in past 30 days	2.9	8.5	5.6	26/27
34.	First tried marijuana before age 13	14.8	14.4	9.7	26/27
35.	Ever used marijuana in lifetime	19.8	46.4	47.1	19/26
36.	Used marijuana in past 30 days	12.1	24.3	26.2	11/27
37.	Used marijuana on school property in past 30 days	3.3	12.6	7.0	27/27
38.	First tried any form of cocaine before age 13	2.2	1.2	1.1	9/26
39.	Ever used any form of cocaine in lifetime	3.6	7.4	8.2	16/27
40.	Used any form of cocaine in past 30 days	1.9	2.8	3.3	8/27
41.	Ever sniffed or inhaled intoxicating substances in lifetime	10.7	15.7	16.0	2/27
42.	Ever used steroids without prescription in lifetime	1.8	2.1	3.1	2/27
43.	Ever used other illegal drugs in lifetime	NA	14.5	17.0	9/24
44.	Ever injected illegal drugs in lifetime	1.3	0.8	2.1	2/27
45.	Were offered, sold, or given illegal drugs on school property in past 12 months	20.0	41.4	31.7	25/26

Note. Source of data: Pateman, Saka, & Lai, 2000, pp. 47–49.

[a]Hawai'i middle schools, grades 6–8, n = 1450. [b]Hawai'i high schools, grades 9–12, n = 1409. [c]United States high schools, grades 9–12, n = 16,262. [d]Hawai'i rank among states having weighted YRBS data. [e]NA = not available.

Results From the 1998 *Hawaii Student Alcohol and Drug Use Study*

In this State of Hawai'i Department of Health, Alcohol and Drug Abuse Division (ADAD) report, Klingle and Miller (1999) reported survey results from 1998 as well as those from previous years to illustrate trends in students' lifetime, 30-day, and daily use of the 12 classes of substances distinguished for the ADAD report. Figures 2 and 3 that follow in this text are reprints from the report that illustrate trends in the prevalence of illicit drug, alcohol, and cigarette use for the surveyed grades, 6, 8, 10, and 12.

As Figure 2 illustrates, from the data on lifetime use (use of a substance at least once in a person's lifetime), the most prevalent substance was alcohol, which has remained fairly steady over the past few years. Lifetime prevalence reports for cigarette use, however, increased steadily to 1996; from 1996 to 1998 there were small declines or leveling off at each grade level. Lifetime prevalence reports of any illicit drug use follow a similar pattern of increase from 1991 to 1996 for all grade levels, then a continued rise for high school and a slight decline and leveling off for grades 8 and 6, respectively, in 1998. These trends in illicit drug use were primarily a function of marijuana use, which increased slightly in 1998 for 10th and 12th graders, decreased for 8th graders, and remained the same for 6th graders. The lifetime prevalence reports of Hawai'i students for tobacco, alcohol, and illicit drugs are generally lower than or nearly equal to the nationwide reports as presented in *Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth.* However, for methamphetamine use, Hawai'i 12th graders' lifetime prevalence reports are higher than the nationwide reports. (Klingle & Miller, 1999)

Figure 3 illustrates the rather dramatic increases from 1993 to 1996 in the monthly use of any illicit drug, alcohol, and cigarettes. Although in 1998 the monthly prevalence reports dropped or leveled off for each grade, the 1998 rates were still higher than those reported for 1993. For illicit drug use, the percentages were still nearly 5 percentage points above the 1993 rates. For alcohol use, the reports were nearly 10 percentage points higher than in 1993. The drops in the rates for 1998 mirror the nationwide trends. Nationwide comparisons of monthly marijuana use show use reported by Hawai'i students was slightly higher for 8th and 10th graders and the same for 12th graders. Monthly alcohol use was higher for 8th graders in Hawai'i and lower for 10th and 12th graders compared to nationwide reports. Monthly cigarette use in Hawai'i was lower than nationwide reports for 10th and 12th graders and equal to nationwide reports for 8th graders. (Klingle & Miller, 1999)

Reports on daily use of substances show cigarettes were used most frequently, followed by marijuana and alcohol. According to survey results, 1% of 6th graders, 5% of 8th graders, 10% of tenth graders, and 14% of 12th graders used cigarettes daily. The daily use of illicit drugs was largely marijuana use, with less than 1% of 6th graders, 2% of 8th graders, and 5% of 10th and 12th graders reporting daily marijuana use. Alcohol was used daily by 1% of 6th graders, 3% of 8th graders, 4% of 10 graders, and 3% of 12th graders reporting in 1998. (Klingle & Miller, 1999)

Table 10 summarizes statewide substance abuse treatment needs as determined by using the DSM-III-R criteria with the 1998 survey results. According to the report, 3% of 6th graders, 10% of 8th graders, 22% of 10th graders, and 29% of 12th graders needed treatment for some type of substance abuse in 1998. Percentages of 10th and 12th graders needing treatment was substantially higher than in 1996. By district, needs for treatment of substance abuse were highest for Hawai'i district (21% of students), followed by Maui and Windward O'ahu (18% each), Kaua'i (17%), Leeward O'ahu (16%), Central O'ahu (15%), and Honolulu (14%) districts. (Klingle & Miller, 1999, p. 16)

In their study, Klingle and Miller (1999) also discussed factors related to the use of substances by youth. Some of the key predictors of substance use they described and had collected data on include beliefs about substances, peer and family influences, and ethnic background. Their findings are discussed below regarding students' perceptions of the availability of alcohol, tobacco, and illicit drugs; students' normative beliefs, that is, their perceptions of peer and family use of alcohol, tobacco, and illicit drugs; and students' exposure to the use of alcohol, tobacco, and illicit drugs. Results show students in Hawai'i perceived alcohol, tobacco, and illicit drugs as less obtainable than students nationwide and less than in past years. This may be in part a result of recent "sting" operations involving the sale of cigarettes to minors. There was in increase from the last survey in 1996 in the percentage of students who believed their classmates used alcohol, tobacco, and illicit drugs. Of students in all grades, over half reported believing that family members used alcohol, nearly half that family members used tobacco, and about a quarter reported believing that family members or other relatives used illicit drugs. Although frequent exposure to others' use of alcohol and illicit drugs had gone down since 1996, survey results showed large percentages of students reporting exposure once a week or more to someone using alcohol and tobacco: approximately 30% of 6th graders, 40% of 8th graders, and over 50% of 10th and 12th graders. Approximately 20% of 10th and 12th graders reported frequent exposure to someone using illicit drugs. (Klingle & Miller, 1999)

Students from different ethnic backgrounds reported different patterns of alcohol and other drug use. The highest substance use was reported by Hawaiian and Caucasian students, the lowest by Chinese students. (Klingle & Miller, 1999)

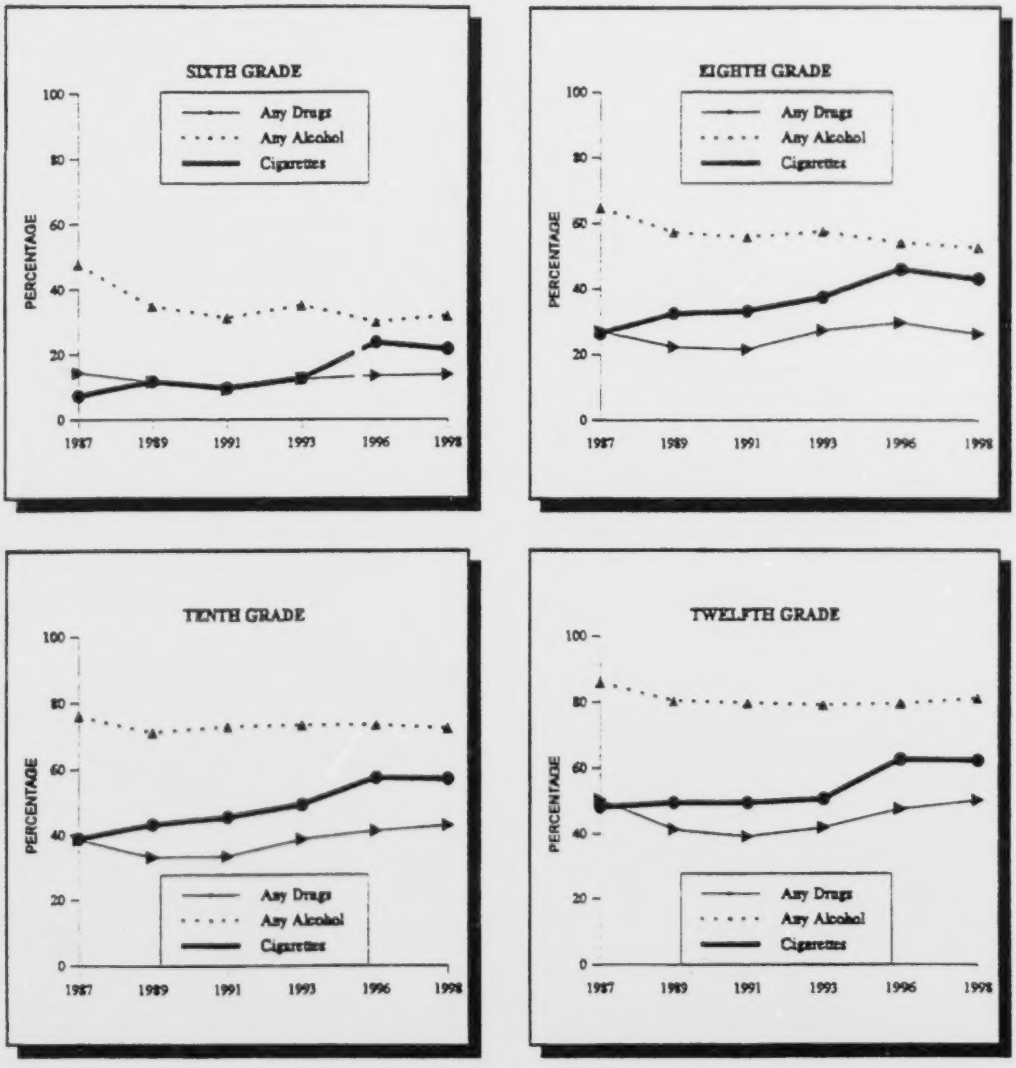

FIGURE 2. Trends in lifetime prevalence of any illicit drug, any alcohol, and cigarette use of 6th, 8th, 10th, and 12th graders, 1987–1998. ("Lifetime prevalence" refers to use of a substance at least once in the person's lifetime.) (Klingle & Miller, 1999, p. 10)

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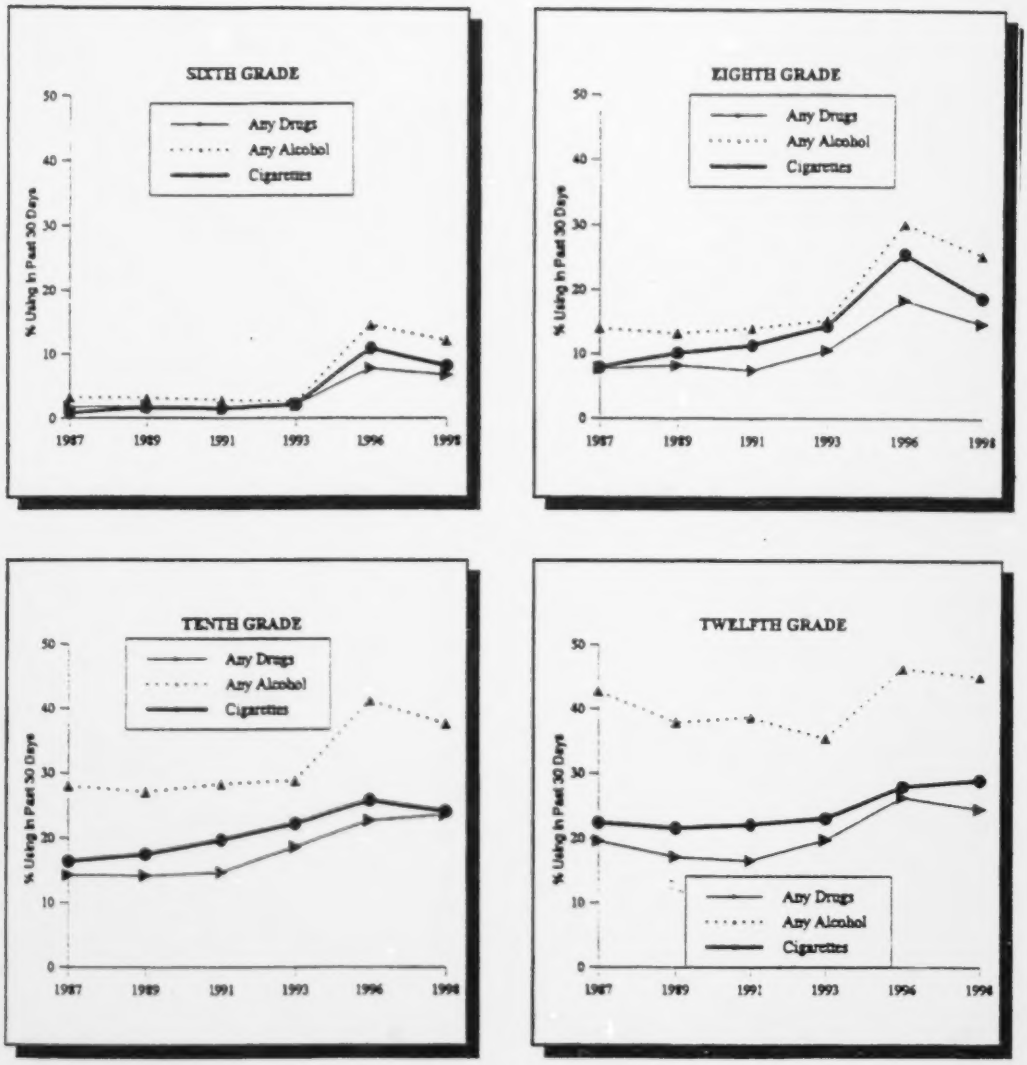

FIGURE 3. Trends in monthly (30-day) prevalence of any illicit drug, any alcohol, and cigarette use for 6th, 8th, 10th, and 12th graders, 1987–1998. ("Monthly prevalence" refers to use of a substance at least once in the previous 30 days.) (Klingle & Miller, 1999, p. 12)

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TABLE 10. *Summary of statewide treatment needs for students in grades 6 through 12, by county, district, and school type: Estimated number and percentage of students needing treatment for alcohol and drug abuse, 1998 (Klingle & Miller, 1999, p. 16)*

COUNTY/DISTRICT TOTAL *N*	TREATMENT NEEDS					
	Alcohol abuse only % *n*	Drug abuse only % *n*	Both alcohol and drug abuse % *n*	ANY SUBSTANCE ABUSE % *n*	Any alcohol abuse % *n*	Any drug abuse % *n*
City/County of Honolulu	3.7%	4.4%	7.3%	15.3%	10.6%	11.7%
56,708	2099	2471	4149	8701	6022	6662
• Honolulu district	3.9%	4.1%	6.3%	14.2%	9.9%	10.4%
16,077	621	652	1015	2282	1588	1679
•Central district	3.0%	4.1%	7.4%	14.6%	10.0%	11.6%
15,882	482	659	1172	2312	1595	1842
•Leeward district	4.0%	4.2%	7.7%	15.9%	11.2%	12.0%
15,645	624	663	1210	2484	1756	1883
•Windward district	4.1%	5.5%	8.3%	17.8%	11.9%	13.8%
9104	372	497	752	1623	1083	1258
Hawai'i county/district	5.3%	4.7%	10.6%	20.7%	15.3%	15.6%
13,842	738	657	1472	2867	2117	2158
Maui county/district	3.5%	5.3%	9.0%	17.8%	12.0%	14.3%
10,200	362	542	917	1819	1228	1462
Kaua'i country/district	2.9%	4.1%	9.9%	17.0%	12.0%	14.1%
5118	147	212	509	869	615	722
All public schools	3.9%	4.5%	8.2%	16.6%	11.6%	12.8%
85,868	3346	3882	7047	14,256	9982	11,004
Private schools	4.0%	2.6%	6.4%	13.0%	9.9%	9.1%
18,804	745	498	1200	2445	1865	1716
TOTAL STATEWIDE	3.9%	4.2%	7.9%	16.0%	11.3%	12.2%
104,672	4091	4380	8247	16,701	11,847	12,720

Note. Calculation of Treatment Needs: A substance abuse/dependency diagnosis is calculated based on the student's responses to items that correspond with the DSM-III-R criteria which assess a variety of negative consequences related to substance use. Students responded to abuse and dependency questions for each of the following substances: alcohol, marijuana, stimulants (cocaine, methamphetamine, speed), depressants or downers (sedatives, heroin) and hallucinogens. Substance abuse is indicated by at least one of the following: (1) continued use of the substance despite knowledge of having a persistent or recurrent problem(s) at school, home, work, or with friends because of the substance (e.g., lower grades, fight with parents/friends, get in trouble at work, have problems concentrating, or physical problems), (2) substance use in situations in which use is physically hazardous (e.g., drinking or using drugs when involved in activities that could have increased the student's chance of getting hurt—for instance, using a knife, climbing, swimming, or driving a vehicle). For the student to be classified as abusing a substance, at least one of the two abuse symptoms must have occurred more than once in a single month or several times within the last year. In addition, the student must not meet the criteria for dependency on the substance. Substance dependency is the most severe diagnosis. Substance dependency is indicated by the student's responses to nine different diagnostic criteria for dependency (e.g., marked tolerance, withdrawal symptoms, use of substances to relieve/avoid withdrawal symptoms, persistent desire or effort to stop use, using more than intended, neglect of activities, great deal of time spent using/obtaining the substance, inability to fulfill roles, drinking or using substances despite having problems). A student is considered dependent on a substance if he/she marked "yes" to at least three DSM-III-R symptoms and for at least two of the symptoms, he/she indicated that it occurred several times. The abuse estimates above include students who *either* abuse or are dependent on a particular substance. Table revised 7/29/1999.

"Quality Counts 2000" Report by *Education Week* Magazine

In the category of school climate, Hawai'i received a grade of "F" in the *Education Week* state by state evaluation of schools called "Quality Counts 2000." Results for all five categories are available on-line at <http://edweek.org/>. Factors that went into judging the school environment included class size, student engagement, parent involvement, choice and autonomy. Data were also presented on school size and school safety, the latter as student responses to questions on physical conflicts, gangs, vandalism, weapons, and feelings of being too unsafe to go to school. Table 11 summarizes the school climate results from the "Quality Counts 2000" evaluation. In terms of disorder and violence, only 50% of 8th graders reported that classroom misbehavior is not a problem or is a minor problem; 35% reported that physical conflicts are a serious or moderate problem, and 24% reported that vandalism is a serious or a moderate problem in 8th grade. About 6% of high school students felt too unsafe to go to school and 6% carried a weapon to school in the past 30 days. And 6% were threatened or injured with a weapon on school property in the past year. Almost 13% were involved in physical fights on school property in the past year, and over 33% had property stolen or deliberately damaged on school property in the past year.

Indicators of parent involvement were low, with only 20% of 8th graders reporting that lack of parental involvement is not a problem or is a minor problem, and that same relatively small percentage reported that more than half of parents participate in parent-teacher conferences.

Confirming earlier data that showed DOD dependents generally attended large schools, the *Education Week* report showed that nearly all of Hawai'i's students attend large schools. In 1998, only 5% of high school students attended high schools with fewer than 900 students. Only 9% of middle school students attended middle schools of 600 or fewer, and just 6% of elementary students went to elementary schools of 350 or fewer students.

TABLE 11. *School climate indicators from the "Quality Counts 2000" evaluation of Hawai'i schools*

CLASS SIZE		
% 4th graders in classes of 25 or fewer students (1998)		43
% 8th graders in reading classes of 25 or fewer students (1998)		54
STUDENT ENGAGEMENT		
% 8th graders in schools reporting that . . .	•**absenteeism** is not a problem or is a minor problem (1998)	80
	•**tardiness** is not a problem or is a minor problem (1998)	61
	•**classroom misbehavior** is not a problem or is a minor problem (1998)	50
PARENT INVOLVEMENT		
% 8th graders in schools reporting that . . .	•**lack of parent involvement** is not a problem or is a minor problem (1998)	20
	•more than half of parents participate in **open house or back-to-school nights** (1998)	42
	•more than half of parents participate in **parent-teacher conferences** (1998)	21
CHOICE AND AUTONOMY		
Statewide public school open-enrollment program (1999)	•Statewide •Limited (voluntary interdistrict or mandatory intradistrict) •No choice	 x
State law allows charter schools (1999)		yes
How strong is the charter school legislation:		weak
Number of charters (1999)		2
SCHOOL SIZE		
% students in **high schools** with 900 or fewer students (1998)		5
% students in **middle schools** with 600 or fewer students (1998)		9
% students in **elementary schools** of 350 or fewer students (1998)		6
ADDITIONAL INFORMATION ON SCHOOL SAFETY		
% students in schools reporting that . . .	•physical conflicts are a serious or moderate problem in **4th grade**	16
	•physical conflicts are a serious or moderate problem in **8th grade**	35
% 8th graders in schools reporting that . . .	•**gang activities** are a serious or a moderate problem (1998)	15
	•**vandalism** is a serious or a moderate problem	24
% high school students who . . .	•**felt too unsafe** to go to school during the past 30 days (1997)	5.6
	•**carried a weapon** on school property during the past 30 days (1997)	6.1
	•were **threatened or injured** with a weapon on school property in the past year (1997)	6.3
	•were in a **physical fight** on school property in the past year (1997)	12.9
	•**had property stolen or deliberately damaged** on school property in the last year (1997)	33.5

Note. Source of data: Education Week "Quality Counts 2000: Who Should Teach?" at <http://edweek.org/sreports/qc00/templates/state_data.cfm?slug=hi_data.htm>, pp. 7-8.

Summary and Discussion

To help determine the relative risk of violence among Department of Defense connected students in Hawai'i's public schools, those students were characterized and located within the pubic school system, then the schools most populated by them were examined using selected measures of risk and indicators of disorder and violence. Data from statewide surveys and studies were also used to assess the overall risk of violence in Hawai'i schools, risks that presumably affect DOD-connected students in Hawai'i schools as well.

Location and Characterization of Schools With High Proportions of DOD Dependents

Of the 246 public schools in Hawai'i in school year 1997–98, 219 schools (89%) had federally connected students enrolled; 26,668 students of the 189,200 total public school enrollment were federal dependents (14%). Their parents were either in one of the branches of the military or worked for the federal government as a civilian employee. In 1997–98, 16,716 students were military dependents, and it is estimated that about half of the 9952 non-military federal dependents were children of DOD civilian employees. That makes about 12% of the total Hawai'i public school enrollment in 1997–98 DOD connected.

The largest impact of DOD-connected students was on Central district where 43% of the students were federal dependents; this was followed by Leeward and Windward districts, where 18% and 12% of students, respectively, were federal dependents. About 95% of the military dependents and 78% of all federal dependents in Hawai'i public schools in 1997–98 were enrolled in 8 high schools, 8 intermediate and middle schools, and 32 elementary schools, most of them in the Central district on O'ahu.

These 48 schools with the highest proportions of federal dependents were selected for closer analysis and description to help characterize the schools where a large percentage of DOD dependents attend. School-level data for the last 3 school years for the 48 schools were summarized and compared to statewide averages. Variables selected for analysis and comparison were those associated with risk and indicators of disorder and violence in the schools: (a) school size; b) low SES, as measured by percentage of students on free or reduced price lunch; (c) percentage of students with limited English proficiency (SLEP); (d) average daily attendance; (e) graduation/completion rate for high schools; (f) percentage of students who gave positive responses to the Effective Schools Survey (ESS) items on home-school relations and learning climate; and (g) offense rates for violent offenses, property offenses, weapons offenses, drug offenses, deportment offenses, and other offenses.

School Size

The most salient risk factor for disorder and violence for DOD-connected students in Hawai'i schools is associated with school size. Defining "large" schools as those

enrolling 750 or more students, Hawai'i has nearly the highest proportion of large schools in the country. A DOE study done in 1992 (Educational Assessment and Accountability System [EAAS]) showed that only Florida had a higher percentage of large schools than Hawai'i's 39%. Comparison to three states with similar total enrollments at that time—Rhode Island, Nevada, and New Hampshire—showed Hawai'i with substantially more large schools than their 15%, 22%, and 8%, respectively. Well-designed research on school size spanning 20 years has shown that at the elementary level smaller schools have a positive effect on student achievement, attendance, satisfaction, and extracurricular participation (Fowler, 1992). Research at the secondary school level is more recent and has investigated effects on various student outcomes, including achievement, educational attainment, attendance, dropout rates, student satisfaction, sense of belonging, adolescent loneliness, substance use and abuse, and extracurricular participation. Typical outcomes have shown that after the factors of district SES and percentage of students from low-income families, school size was the next most consistent factor related to outcomes—and the relationship was negative (EAAS, 1992). Although results of studies on the effects of school size on achievement have been mixed in the secondary school level research, the studies appear to be in full agreement that smaller schools have positive effects on student attitudes, satisfaction, attendance, and extracurricular participation (Fowler, 1992). The DOE study on Hawai'i public schools found the following.

> Larger schools do not produce better student outcomes. To the contrary, we found that *smaller* public secondary schools in Hawaii had relatively smaller proportions of students failing HSTEC, smaller proportions of students retained in grade, higher attendance rates (grade 10 but not grade 8 schools), and more positive perceptions of the school's climate for learning among both students and parents. . . . We also found that larger schools, both elementary and secondary, had relatively more incidents and higher costs of school property crimes (burglaries, thefts, and vandalism) than did smaller schools. (EAAS, 1992, p. 26)

In *Education Week* magazine's annual rating of state school systems, "Quality Counts 2000," the school sizes used as "cut-offs" for their data presentation were 900 students for high schools, 600 students for middle schools, and 350 students for elementary schools. Hawai'i had fewer than 10% of students in schools with enrollments below these thresholds. The average size of Hawai'i high schools is over 1600 students (nearly twice the "Quality Counts 2000" size); for intermediate schools (grades 7–8) it is over 900 and for elementary schools, over 700. The average size of the schools with the highest percentages of DOD-connected dependents exceeded these state averages at every level: by 100 students at the high school level, by about 50 students at the intermediate level, and by over 130 students at the elementary level. There is a positive correlation between the percentage of military dependents in elementary schools in Hawai'i and school size. DOD-connected students in Hawai'i generally attend very large, urban schools and are thus subject to the risks that accompany large school size.

Other Measures of Risk

In general, the Hawai'i schools with the highest proportions of DOD-connected students had lower percentages of students receiving free or reduced price lunches, lower percentages of students with limited English proficiency, higher graduation/completion rates, and better attendance than the state averages for comparable schools on these variables. Of note, however, is that although the percentage of students receiving free or reduced price lunch was lower than the state average at all levels, at the elementary level the high-DOD schools ranged from 4–70% and averaged 35%, and at the intermediate level they ranged from 15–50% and averaged over 25% of enrollment on free or reduced lunch. This indicates some risk associated with low socio-economic status on these campuses.

Effective Schools Survey

The results of student responses to the Effective Schools Survey items on home-school relations and learning climate were consistent with what might be predicted based on the research about school size. Among the high schools with the highest percentages of DOD-connected students were the ones with the state's lowest percentages of students who responded positively to survey items about home-school relations and learning climate. The average percentages of positive responses varied over two years, with the average a bit higher than the state's one year and quite a bit lower the other. At the intermediate level the high-DOD schools were consistently below the state averages on both scales and usually contained the minimum values in the range. Overall, students at intermediate schools with the highest proportions of DOD-connected students had a lower opinion of their schools' home-school relations and learning climates than did students statewide. Elementary students at high-DOD schools responded the same as the state average on home-school relations but were less positive about their schools' learning climates than students statewide.

Offenses Leading to Suspensions

School-level data on six categories of offenses leading to suspensions were examined for patterns that might indicate more or less risk for students in schools with high proportions of military and federal dependents. Correlation coefficients at every school level showed very weak, if any, positive or negative linear relationships between proportions of military, non-military, or all federal dependents in a school and rates of commission of offenses leading to suspensions. By those results, it appears that high-DOD schools as a group in school year 1997–98 were neither remarkably safer nor more dangerous than the average Hawai'i public school.

The number of offenses in each category at a school was divided by the enrollment and multiplied to achieve an offense rate per 100 students. Average offense rates for the high-DOD schools were compared to average offense rates for comparable schools in the state to assess the relative disorder and violence among schools with high

proportions of DOD-connected students. With one exception, at all levels and for all categories of offenses the average offense rates at the schools with the highest percentages of DOD-connected students were below or at the state averages for comparable schools. The exception was for drug offenses, where the rate of offenses at several high-DOD high schools was consistently above the statewide rate. A further examination of these five particular high schools' data showed that the most frequent drug offense leading to suspension at these schools was for smoking cigarettes. Last school year an average of 78% of the drug offenses leading to suspensions at these schools were smoking offenses, and 16% were marijuana offenses. Other illegal drug offenses accounted for 5% or less of any of these schools' drug offenses, and alcohol accounted for 6% or less. The higher suspension rate for smoking at these particular high schools may indicate a bigger problem with smoking at these schools than at the average high school in the state, or it may mean there was more vigorous enforcement of the no-smoking rules at these particular schools. In general, the offense data do not indicate a greater risk for disorder and violence among the DOD-connected students in Hawai'i relative to the rest of Hawai'i's public school students.

Although the average offense rates for these schools compared favorably with the state averages, the ranges of offense rates were generally larger at the intermediate level. This may indicate that there was more variation in the levels of disorder and violence in the high-DOD intermediate schools than in the high schools or elementary schools with high percentages of DOD-connected students. To better understand possible risks for violence at these schools in particular, a look at statewide risks is helpful. In this study the results of the Hawai'i Middle School and High School Youth Risk Behavior Surveys (YRBS) administered in spring 1997 and the State of Hawai'i Department of Health, Alcohol and Drug Abuse Division (ADAD) study done in 1998 were used to find areas of concern about student health and safety that could present risks to the DOD dependents in Hawai'i as well as to other students.

Statewide Indicators of Risk for Disorder and Violence

Data from the YRBS reveal many positive findings about patterns of high risk behaviors among Hawai'i students in grades 6–8 and 9–12 relative to those of the representative U.S. high school sample. They also raise some concerns about unsafe school campuses in Hawai'i and Hawai'i students' early use of marijuana and suicide ideation.

Unsafe Campuses

The good news is that Hawai'i high school students are the least likely to carry weapons when compared to the other 27 states and territories with weighted YRBS data. However, Hawai'i middle school students are more likely to carry guns and weapons other than guns than both Hawai'i and U.S. high school students and as likely as U.S. high school students to carry weapons on school property. Over 7% of Hawai'i middle school students reported carrying a gun in the past 30 days, over 20% reported carrying a

weapon other than a gun, and nearly 8% carried a weapon on school property in the past 30 days.

Compared to 4% of U.S. high school students, 5.6% of Hawai'i high schools students and 6% of Hawai'i middle schools students reported feeling too unsafe to go to school in the past 30 days. Over 33% of high school students and 50% of middle school students in Hawai'i reported property stolen or deliberately damaged on school property in the last year. And over 42% of middle school students in Hawai'i reported being in a physical fight in the last year, more than Hawai'i and U.S. high school students. According to data in the "Quality Counts 2000" report, 16% of 4th graders and 35% of 8th graders reported that physical conflicts are a serious or moderate problem. Only half of 8th graders reported that classroom misbehavior was not a problem or was a minor problem.

Substance Use and Abuse

Since research shows that early use predicts adult abuse (Robins & Pryzbec as cited in Klingle & Miller, 1999), Hawai'i students' early use of marijuana is of great concern; almost 15% of middle school students reported first trying it before age 13. In addition, over 35% of them first smoked a cigarette and 44% first drank alcohol before age 13. At the high school level, 25% of Hawai'i students reported binge drinking (having 5 or more drinks in a row) in the past 30 days. Hawai'i high school students were more likely than U.S. high school students to have smoked cigarettes on campus (16%) and more likely than students in any of the other 27 states and territories with weighted YRBS data to have reported drinking alcohol (8.5%) or using marijuana (12.6%) on school property. Over 41% of Hawai'i high school students and 20% of middle schools students reported being offered, sold, or given an illegal drug on school property. This is consistent with the ADAD study finding that about 20% of 10th and 12th graders in Hawai'i reported frequent exposure (once a week or more) to someone using illicit drugs. Since key predictors among the factors related to the use of substances by youth are their belief about substances and peer and family influences (Klingle & Miller, 1999), this exposure to illicit drugs and their use and availability on school property is of great concern.

Also disturbing are the increases from 1993 to 1996 in monthly use of any illicit drug, alcohol, or cigarettes by the students surveyed in the ADAD study. Even though the trend dropped or leveled off in 1998, those monthly rates are higher in all cases than the 1993 rates: up 5% for monthly use of illicit drugs and up 10% for alcohol. These trends are consistent with nationwide trends, except for Hawai'i students' monthly use of marijuana, which was higher than nationwide rates in 1998 for 8th and 10th graders responding to the ADAD survey. Daily use of cigarettes by Hawai'i 10th and 12th was reported by 10% and 12% of those students surveyed, respectively.

Although not all the substances used by Hawai'i students are illegal, their use by minors and on school property are obvious risks or indicators of disorder and can affect

all students' normative beliefs, that is, their perceptions of peer use. This increased use predicts further increases in use and abuse. Indeed, statewide substance abuse treatment needs increased substantially in 1998, according to the ADAD study.

Lack of Parent Involvement

There appears to be a glaring lack of involvement on the part of parents of public school students in Hawai'i at a time when it is most needed. The "Quality Counts 2000" report shows only 20% of 8th graders reporting in 1998 that lack of parent involvement is not a problem or is a minor problem at their school and only 25% reporting that more than half of parents participate in parent-teacher conferences.

Conclusion

Department of Defense connected students in Hawai'i attend some of the largest public schools in the state, with the average enrollment at elementary, intermediate, and high schools well exceeding the already high state averages for those levels. They are thus at risk for the kinds of disruptions and negative effects that generally accompany large school size. In spite of that, however, the risk of violence among Department of Defense connected students in Hawai'i schools appears to be no greater than, and in some ways is less than, that for other students in the public schools in Hawai'i. Among the schools with the highest percentages of DOD-connected students, the intermediate schools seem to be most at risk for disorder and violence. And the schools with high proportions of DOD-connected students likely share with the other schools in the state a vulnerability to the disorder and violence indicated by students' relatively high rates of reporting risk behaviors related to unsafe school campuses—physical fights, property damage and theft, early marijuana use, alcohol and marijuana use on school property, and the availability on school property of illegal drugs.

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